The

Geophysical Journal

of the

Royal Astronomical Society

incorporating

the Geophysical Supplement to the Monthly Notices of the R. A. S.

Volume 2, 1959

Published and Sold by the

Royal Astronomical Society

Burlington House, London, W.1, England

1959

INDEX

PAGE

Battacharji, J. C., An Earth model and the reduction of gravity observations for use in Stokes's integral 136
Bolt, B. A., Travel times of *PKP* up to 145° 190
Book Reviews:
Contributions in Geophysics in Honor of Beno Gutenberg 84
Report of the Oslo Polar Atmosphere Symposium, Part I; Meteorology Section .. 85
Annals of the International Geophysical Year, Vol. VI 86
Classical Mechanics 87
The Magneto-Ionic Theory and its Applications to the Ionosphere 258
Fonctions Spheriques de Legendre et Fonctions Spheroidales, Vols. I and II .. 259
External Gravity Field of the Earth and Fundamental Constants Involved 384
Celestial Mechanics 386
Bowden, K. F., L. A. Fairbairn and P. Hughes, The distribution of shearing stresses in a tidal current 288

Canada, Report on geophysical research in, G. D. Garland 45
Charnock, H., Tidal friction from currents near the seabed 215
Cook, A. H., Developments in dynamical geodesy 222
—— The external gravity field of a rotating spheroid to the order of e^3 199
Cooper, L. R. and C. Jones, The determination of virgin strata temperatures from observations in deep survey boreholes 116
Creer, K. M., A.c. demagnetization of unstable Triassic Keuper Marls from S.W. England 261
——, *E. Irving and A. E. M. Nairn*, Palaeomagnetism of the Great Whin Sill 306

Earth, physics of the interior of:
The determination of virgin strata temperatures from observations in deep survey boreholes, L. R. Cooper and C. Jones 116
Wave velocities below the Mohorovičić discontinuity, B. Gutenberg 348
Gravity anomalies and crustal structure in South Africa, A. L. Hales and D. I. Gough 324
Evidence for an intermediate layer from crustal structure studies in the Eastern Transvaal, A. L. Hales and I. S. Sacks 15
Ewing, M., M. Landisman and Y. Sato, The distortion of pulse-like earthquake signals by seismographs 101

Fairbairn, L. A., K. F. Bowden and P. Hughes, The distribution of shearing stresses in a tidal current 288
Fischer, A. G. and R. B. Hargraves, Remanent magnetism in Jurassic Red Limestones and radiolarites from the Alps 34

Garland, G. D., Current research in geophysics in Canada 45
Geodesy:
The external gravity field of a rotating spheroid to rhe order of e^3, A. H. Cook 199
Developments in dynamical geodesy, A. H. Cook 222
Geomagnetism:
Directions of rapid geomagnetic fluctuations, W. D. Parkinson 1
The transmission of geomagnetic disturbances through the atmosphere and interplanetary space, J. H. Piddington 173
Anomaly of geomagnetic variations in Japan, T. Rikitake 276
Girdler, R. W., A palaeomagnetic study of some Lower Jurassic rocks of N.W. Europe .. 353
Gough, D. I. and A. L. Hales, Gravity anomalies and crustal structure in South Africa .. 324

PAGE

Gravity:
An Earth model and the reduction of gravity observations for use in Stokes's integral, J. C. Bhattacharji 136
The external gravity field of a rotating spheroid to the order of e^3, A. H. Cook 199
Gravity anomalies and crustal structure in South Africa, A. L. Hales and D. I. Gough 324
Observations with the Cambridge pendulum apparatus in North, Central and South America in 1958, J. E. Jackson 337
The reduction of gravity observations, Harold Jeffreys 42
Gutenberg, B., Wave velocities below the Mohorovičić discontinuity 348

Hales, A. L. and D. I. Gough, Gravity anomalies and crustal structure in South Africa .. 324
——, *and I. S. Sacks*, Evidence for an intermediate layer from crustal structure studies in the Eastern Transvaal 15
Hargraves, R. B. and A. G. Fischer, Remanent magnetism in Jurassic Red Limestones and radiolarites from the Alps 34
Heezen, Bruce C., Dynamic processes of abyssal sedimentation: erosion, transportation and redeposition on the deep-sea floor 142
Hughes, P., K. F. Bowden and L. A. Fairbairn, The distribution of shearing stresses in a tidal current 288

Irving, E., Palaeomagnetic pole positions: a study and analysis 51
——, Magnetic "cleaning" (Letter to the Editors) 140
——, *K. M. Creer and A. E. M. Nairn*, Palaeomagnetism of the Great Whin Sill 306

Jackson, J. E., Observations with the Cambridge pendulum apparatus in North, Central and South America in 1958 337
Jeffreys, Harold, The reduction of gravity observations 42
Jones, C. and L. R. Cooper, The determination of virgin strata temperatures from observations in deep survey boreholes 116

Landisman, M., Y. Sato and M. Ewing, The distortion of pulse-like earthquake signals by seismographs 101

Macdonald, J. Ross, Rayleigh-wave dissipation functions in low-loss media 132
MacDowall, J., A note on the relation between wind velocity and the amplitude of microseisms on the coast of Antarctica 364
Microseisms:
A note on the relation between wind velocity and the amplitude of microseisms on the coast of Antarctica, J. MacDowall 364

Nairn, A. E. M., K. M. Creer and E. Irving, Palaeomagnetism of the Great Whin Sill .. 306

Oceanography:
The distribution of shearing stresses in a tidal current, K. F. Bowden, L. A. Fairbairn and P. Hughes 288
Tidal friction from currents near the sea bed, H. Charnock 215
Dynamic processes of abyssal sedimentation: erosion, transportation and redeposition on the deep-sea floor, Bruce C. Heezen 142

Pakistan, Report on geophysical progress in, H. I. S. Thirlaway 241
Palaeomagnetism:
A.C. demagnetization of unstable Triassic Keuper Marls from S.W. England, K. M. Creer 261
Palaeomagnetism of the Great Whin Sill, K. M. Creer, E. Irving and A. E. M. Nairn 306
A palaeomagnetic study of some Lower Jurassic rocks of N.W. Europe, R. W. Girdler 353

PAGE

Palaeomagnetism:
Remanent magnetism in Jurassic Red Limestones and radiolarites from the Alps, R. B. Hargraves and A. G. Fischer 34
Palaeomagnetic pole positions: a survey and analysis, E. Irving 51
Magnetic "cleaning" (Letter to the Editors), E. Irving 140

Parkinson, W. D., Directions of rapid geomagnetic fluctuations 1
Piddington, J. H., The transmission of geomagnetic disturbances through the atmosphere and interplanetary space 173

Reports of Discussions and Meetings:
Geophysical Discussions of the Royal Astronomical Society:
Turbidity currents; high-speed under water flow of sediment suspensions (1958 November 28) 248
The automatic reduction of geophysical data (1959 January 23) 250
Characteristics of the Antarctic Ice Sheet (1959 February 27) 164
Discussion of papers received in the session 1958/59 (1959 March 20) .. 255
Fifteenth meeting of the European Association of Exploration Geophysicists (London, 1958 December) 80
Discussion on the geological and geophysical results of the cruises of R.R.S. *Discovery II* during 1958 May–July (Cambridge, 1959 March 4) 168
Meeting of the I.A.U. Joint Commission on solar and terrestrial relationships (Moscow, 1958 August 12) 369
Reports on Progress in Geophysics:
Developments in dynamical geodesy, A. H. Cook 222
Current research in Canada, G. D. Garland 45
Dynamic processes of abyssal sedimentation: erosion, transportation and re-deposition on the deep-sea floor, Bruce C. Heezen 142
Palaeomagnetic pole positions: a survey and analysis, E. Irving 51
Report on progress in Pakistan, H. I. S. Thirlaway 241
Rikitake, T., Anomaly of geomagnetic variations in Japan 276

Sacks, I. S., and A. L. Hales, Evidence for an intermediate layer from crustal structure studies in the Eastern Transvaal 15
Sato, Y., M. Landisman and M. Ewing, The distortion of pulse-like earthquake signals by seismographs 101
Seismology:
Travel times of *PKP* up to 145°, B. A. Bolt 190
Wave velocities below the Mohorovičić discontinuity, B. Gutenberg 348
Evidence for an intermediate layer from crustal structure in the Eastern Transvaal, A. L. Hales and I. S. Sacks 15
The distortion of pulse-like earthquake signals by seismographs, M. Landisman, Y. Sato and M. Ewing 101
Rayleigh-wave dissipation functions in low-loss media, J. Ross Macdonald .. 132
Torsional oscillations of the Earth and some related problems, H. Takeuchi .. 89

Takeuchi, H., Torsional oscillations of the Earth and some related problems 89
Thirlaway, H. I. S., Geophysics in Pakistan 241